

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 18, 2001, 15:53:41 ; Search time 22.87 Seconds
(without alignments)
2025.218 Million cell updates/sec

Title: US-09-587-111-5

Perfect score: 4004
Sequence: 1 MTPSSSPVFLRLETLTGQF.....EDEDGASEENVYVOLLQSN 764

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 412676 seqs, 60623988 residues

Total number of hits satisfying chosen parameters: 412676

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

A_Geneseq_0601:*

- 1: /SIDSR/gcgdata/geneseq/geneseq/AA1980.DAT:*
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- 3: /SIDSR/gcgdata/geneseq/geneseq/AA1982.DAT:*
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- 20: /SIDSR/gcgdata/geneseq/geneseq/AA1999.DAT:*
- 21: /SIDSR/gcgdata/geneseq/geneseq/AA2000.DAT:*
- 22: /SIDSR/gcgdata/geneseq/geneseq/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	4004	100.0	764	20	AAV29469
2	4004	100.0	764	20	AAV06559
3	4004	100.0	764	21	AAV97358
4	4004	100.0	764	22	AAV35622
5	3988.5	99.6	763	20	AAV42308
6	3988.5	99.6	763	20	AAV29471
7	3939	98.4	764	21	AAV84834
8	3258	81.4	630	21	AAV92364
9	3051.5	76.2	761	20	AAV06556
10	3051.5	76.2	761	20	AAV9790
11	3036.5	75.8	727	20	AAV06560

12	3036.5	75.8	727	20	AAV9798	Human VRRP-1 (VR2)
13	2240	55.9	436	21	AAV97359	Human VR-2 (altern
14	2230	55.7	554	21	AAV97360	Rat partial VR-2 p
15	1689	42.2	843	20	AAV06561	Chicken capsacin
16	1689	42.2	843	20	AAV97299	Chicken VRI capsal
17	1652	41.3	838	20	AAV06555	Rat capsacin rece
18	1652	41.3	838	20	AAV9789	Rat VRI capsacin
19	1651.5	41.2	839	21	AAV97357	Human VR-1 protein
20	1648.5	41.2	839	21	AAV96478	Human vanilloid re
21	1644.5	41.1	839	20	AAV30155	A human vanilloid
22	1644.5	41.1	839	20	AAV06558	Human capsacin re
23	1644.5	41.1	839	21	AAV32127	Human vanilloid re
24	1640.5	41.0	839	20	AAV30152	A human vanilloid
25	1638.5	40.9	839	20	AAV30153	Human vanilloid va
26	1455	36.3	963	21	AAV96479	Human vanilloid re
27	1440	36.0	279	19	AAV4908	Human secreted pro
28	956.5	23.9	217	20	AAV29470	Human vanilloid re
29	637	15.9	725	22	AAV00412	Human calcium ion
30	635	15.9	732	22	AAV00413	Human calcium ion
31	634	15.8	725	22	AAV31595	Amino acid sequenc
32	607.5	15.2	727	22	AAV31596	Amino acid sequenc
33	482.5	12.1	451	22	AAV00414	Human calcium ion
34	274	6.8	57	20	AAV9793	Human T11251 amino
35	272	6.8	232	19	AAV75021	Human secreted pro
36	247	6.2	71	20	AAV9792	Rat VRI capsacin
37	224.5	5.6	974	20	AAV55960	Human transient re
38	146	3.6	1095	20	AAV00931	Prostate-tumour de
39	144.5	3.6	1104	22	AAV95437	Human calcium chan
40	140.5	3.5	1791	22	AAV20121	Human sodium chan
41	140	3.5	1214	16	AAV80097	Black widow spider
42	138.5	3.5	352	21	AAV11616	D. Immitis ankyrin
43	138.5	3.5	1745	19	AAV70608	Full length ankyrin
44	138.5	3.5	1745	19	AAV76776	D. Immitis ankyrin
45	138.5	3.5	1745	21	AAV11589	D. Immitis ankyrin

ALIGNMENTS

RESULT 1	AAV29469	standard; Protein: 764 AA.
ID	AAV29469	
XX	AAV29469:	
AC	AAV29469:	
XX	08-Oct-1999	(first entry)
DT	08-Oct-1999	
XX	Human vanilloid receptor homologue VANILREP2.	
DE	Human vanilloid receptor homologue VANILREP2.	
KW	Human: vanilloid receptor homologue; VANILREP2; polymorphic variant;	
KW	PVP-1; therapy: diagnosis: chronic pain; neuropathic; postoperative;	
KW	rheumatoid arthritis; neuralgia; algesia; nerve injury; ischaemia;	
KW	neurodegeneration; stroke; incontinence; inflammatory disorder.	
XX		
OS	Homo sapiens.	
XX		
PN	MO9937765-A1.	
XX	29-JUL-1999.	
PD	29-JUL-1999.	
XX		
PF	25-JAN-1999;	99MO-EP00420.
XX		
PR	20-JAN-1999;	99GB-0001209.
PR	27-JAN-1998;	98EP-0300549.
PR	26-OCT-1998;	98GB-0023421.
XX		
PA	(SWIK) SMITHKLINE BEECHAM PLC.	
XX		
PI	Davis JB, Duckworth DM, Hayes PD;	
DR	WPI; 1999-479049/40.	
DR	N-PSDB; AA207114.	
XX		

PT New human vanilloid receptor homologues (VANILREP2)

XX Claim 4: Page 30-32; 47pp: English.

XX The present sequence represents a human vanilloid receptor homologue,
CC designated VANILREP2. VANILREP2 can be used to diagnose disease or
CC susceptibility to disease related to expression or activity of
CC VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
CC including pain, (for example chronic, neuropathic, postoperative,
CC rheumatoid arthritis), neuralgia, algasia, nerve injury, ischaemia,
CC neurodegeneration, stroke, incontinence, and inflammatory disorders.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 MTSPPSSPVFRLETTLDGGEDGSEADRGKLDGSGGLPMPESQFQGEDRKFAQIRVNLNY 60

1 mtsppsspvfrletldgggedgseadrgkldgsgglpmpesqfqedrkfapqirvnly 60

61 RKCTGASQDPNRFDRKLFNNAVSRCVPEPDLAGLPYLSTKSKYLTDSEYTGSGTKTCL 120

61 rkctgasqdpnrfdrklnnavsrgvpedlaglpeylstkskyltdseytsgstgktcl 120

121 MKAVLNLIKQGVNACILPLQIDRDSGNPOPLVNAOCTDDYRGHSAALHAIEKRSIQCYK 180

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181 LIVENGANVHARACGRFFQKQGTCTCFEGELPLSLACTKQMDVSYLLENPHQAPSLQA 240

181 livenanganharacgrffqkggtctcfegelpslactkqmdvsvyllenphqapslqg 240

241 TDSOGTVAHVMISDNSENATAYTSWDGLQACARLCFVQEDIRNLQDLTPKL 300

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361 hcksprrhnmvlepinlklqakmdllipkftinlcnltymftfavaavhqpplkqga 420

421 PHLKAVGSMILTGHIILGIVLYLQGLWYFMRHRHPIWISFIDSFEILFEOALL 480

421 phlkavgsmltghililgivitlylqglwylfmrhrhpiwisfidseilfleoall 480

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481 tvvsgvclcfatewylpplvlsalvglmnllytrgfohtgisvmaiokyrlldlrfl 540

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541 iylvflfgfvalvlsisqearpeaptcrnatesvopmegdegnagaqrglteaslel 600

601 FKFTTGMELAPQEOHFGMVTLLLAVALLYTILLNMLTALMSEPTNSVATDSMSIM 660

601 fkfttgmelapqeoahfgmvtlllavallytillnmltalmscptnsvatdsmsim 660

661 KLOKALISVLEMNGYWMCKRKORAGVMTLVGTCPDSSPDERMCFRVEEYWMASMEOTLPT 720

661 klokalisvlemngywmckrkoragvmtlvgtcpdsspdermcfrveeywmasmotlpt 720

721 LCEBDSGAGVPRILENPLVLAPEKEDDGAASEBNYIPVOLLQSN 764

721 lcebdsagavprilenvplvaspekededgaseenypvqllqsn 764

RESULT 2

AAV06559
ID AAV06559 standard; Protein; 764 AA.

AC AAV06559;

DT 08-OCT-1999 (first entry)

DE Human vanilloid receptor-related polypeptide 1 (VRRP-1).

KW Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;

KW capsaicin receptor; VR1; human; vanilloid; analgesic; pain;

KW inflammation; therapy; diagnosis.

OS Homo sapiens.

PN W09937675-A1.

PD 29-JUL-1999.

PF 22-JAN-1999; 99WO-US01418.

PR 22-JAN-1998; 98US-0072151.

PA (RECC) UNIV CALIFORNIA.

PI Brake AJ, Caterina M, Julius DJ;

DR WPI: 1999-469113/39.

DR N-PSDB; AAX87492.

PT New isolated capsaicin receptor polypeptide and related nucleic acid

PT - useful for detecting vanilloid compounds, identifying modulators,

PT and in diagnosis or treatment of e.g. pain and inflammation

PS Claim 4: Page 110-112; 120pp; English.

XX The present sequence represents human vanilloid receptor-related
CC polypeptide 1 (VRRP-1 or VR2), as deduced from a cDNA clone (see
CC AAX87492) isolated from human CCRF-CEM cells. VRRP-1 is an
CC example of a capsaicin receptor-related polypeptide of the
CC invention. It is not activated by capsaicin or heat, but may
CC interact with the novel capsaicin receptor VR1 (see AAV06558). The
CC invention provides vanilloid receptor polypeptides and
CC polynucleotides, including capsaicin receptor-related polypeptides
CC and polynucleotides, as well as expression vectors, host cells and
CC transgenic animals. It also provides a method of using such
CC receptors to identify vanilloid compounds in natural products or
CC to screen candidate compounds that modulate capsaicin receptor
CC function for use as analgesics (vanilloid analogues, therapeutic
CC antibodies, antisense oligonucleotides, capsaicin receptor-encoding
CC polynucleotides for gene therapy), flavour-enhancing agents, etc.

CC Capsaicin receptor-related polypeptides and specific antibodies can
CC also be used for the diagnosis and treatment of human disease and
CC pain.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;

Best Local Similarity 100.0%; Pred. No. 0; Mismatches 0; Indels 0; Gaps 0;

Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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61 RKCTGASQDPNRFDRKLFNNAVSRCVPEPDLAGLPYLSTKSKYLTDSEYTGSGTKTCL 120

61 rkctgasqdpnrfdrklnnavsrgvpedlaglpeylstkskyltdseytsgstgktcl 120

121 MKAVLNLIKQGVNACILPLQIDRDSGNPOPLVNAOCTDDYRGHSAALHAIEKRSIQCYK 180

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QY 241 TDSCGNVYLAHVAISDNASFNIALVTSMDGLIQAGARLCPTVQLEDIRNLQDLPPLK 300
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Db 241 tdsqgnvylahvaimsdnsaenialvtsmgyglldqagrlcptvqlqledirnlqdlpplk 300
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Db 361 hcksphrhvmvleplnklldakwdlllpkfflnclimlymfiftavayngpnlkkaaa 420
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Db 421 phlkaevnsmltghlllllgilylvqglwytwrhvfifwisfidsyfeillfllfgall 480
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XX PD 25-MAY-2000.
XX PF 12-NOV-1999; 99WO-US26701.
XX PR 13-NOV-1998; 98US-0108322.
XX PR 28-DEC-1998; 98US-0114078.
XX PR 26-FEB-1999; 99US-0258633.
XX PR 19-OCT-1999; 99US-0421134.
XX
XX (MILL-) MILLENNIUM PHARM INC.
XX
XX PI Curtin RAJ;
XX
XX DR WPI: 2000-387790/33.
XX DR N-PSDB: AAA30234.
XX
XX PT New capsacin/vanilloid receptor polynucleotides and polypeptides, used
XX PT to modulate pain signalling mechanisms
XX
XX PS Claim 11; Fig 2; 183pp; English.
XX
XX CC The present sequence is the protein sequence for human
XX capsacin/vanilloid receptor VR-2, which is involved in pain signalling.
XX CC The coding sequence was isolated by searching a heart cDNA library for
XX genes encoding novel receptors of the capsacin/vanilloid family, and has
XX been shown to be located at chromosome 17p11-12. This region has been
XX associated with myasthenia gravis, Smith-Magenis syndrome, COMD5,
XX CC cone-rod dystrophy, choroidal dystrophy, central areolar and retinal cone
XX CC dystrophy, and it is possible that the protein may be used to treat or
XX CC diagnose these disorders. In addition, the gene, protein and its
XX antibodies can be used to diagnose and treat hyperalgesia, inflammation,
XX CC infection, ischaemia, joint pain, tooth pain, headaches, pain associated
XX with surgery or neuropathic pain, possibly via the use of gene therapy.
XX
XX SQ Sequence 764 AA:

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Query Match 100.0%; Score 4004; DB 21; Length 764;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 4
AAB35622
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XX
XX AAB35622;
AC
XX
XX
DT 14-FEB-2001 (first entry)
XX
XX Human vanilloid receptor like receptor protein.
DE
XX
XX VR-L; vanilloid receptor-like receptor; pain; infection; allergy;
KM mechanical injury; lymphoid tissue; human.
XX
OS Homo sapiens.
XX
XX GB2346882-A.
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XX 23-AUG-2000.
PD
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PF
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XX (MERI ) MERCK SHARP & DOHME LTD.
PA
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XX Bonnett TP;
PI
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XX WPI: 2001-064250/08.
DR
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XX N-PSDB; AAC60297.
XX
XX New polynucleotide encoding human vanilloid receptor-like receptor for
XX diagnosing and treating pain, infections, allergies, and cancers -
XX Claim 1; Fig 1; 36pp; English.
XX
XX The present invention relates to the human vanilloid receptor-like
XX receptor. This receptor may be used for diagnosing or treating
XX conditions associated with altered vanilloid receptor-like (VR-L)
XX receptor expression. It may also be used to treat abnormal conditions
XX associated with pain. Conditions or diseases that can be diagnosed or
XX treated include viral, bacterial and fungal infections, allergic
XX responses, mechanical injury associated with trauma, hereditary
XX diseases, lymphoma or carcinoma, or other conditions which activate
XX the genes of the lymphoid tissues.
XX
XX Sequence 764 AA:
SQ
XX
XX
XX Query Match 100.0%; Score 4004; DB 22; Length 764;
XX Best Local Similarity 100.0%; Pred. NO. 0;
XX Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Db
OY 121 MKAVNLKKGVNACILPLQIDRDSGNPQPLVNAOCTDDYRGHSAHLIAIEKRSIQCVK 180
    |||
    121 mkavnlkkgvnacilpllqidrdsngpplvnaqctddyrghsahliaiekrsiqcvk 180
Db
OY 121 mkavnlkkgvnacilpllqidrdsngpplvnaqctddyrghsahliaiekrsiqcvk 180
    |||
    121 mkavnlkkgvnacilpllqidrdsngpplvnaqctddyrghsahliaiekrsiqcvk 180
Db
OY 181 LIVENGANVHARACGRPFQKGGCTCFYFGEPLVSLAACKTQMDVSYLLENPHQASLOA 240
    |||
    181 livenGANVHARACGRPFQKGGCTCFYFGEPLVSLAACKTQMDVSYLLENPHQASLOA 240
Db
OY 181 livenGANVHARACGRPFQKGGCTCFYFGEPLVSLAACKTQMDVSYLLENPHQASLOA 240
    |||
    181 livenGANVHARACGRPFQKGGCTCFYFGEPLVSLAACKTQMDVSYLLENPHQASLOA 240
Db
OY 241 TDSQGNVTVAHALVMSIDNSAENIALVTSMDGLQAGARLCPVOLEDIRNLODLTPKL 300
    |||
    241 tdsqgnvtvahalvmsidnsaenialvtsmdgllqagarlcpvtgledirnlqdltpkl 300
Db
OY 241 tdsqgnvtvahalvmsidnsaenialvtsmdgllqagarlcpvtgledirnlqdltpkl 300
    |||
    241 tdsqgnvtvahalvmsidnsaenialvtsmdgllqagarlcpvtgledirnlqdltpkl 300
Db
OY 301 AAKEGKIEIFRHILQREFSGLSHSRKFTWECYGPVRSIYDLASVDSCENSVLEIIAF 360
    |||
    301 aakegkieftrhllqrefsglsHSRKFTWECYGPVRSIYDLASVDSCENSVLEIIAF 360
Db
OY 301 aakegkieftrhllqrefsglsHSRKFTWECYGPVRSIYDLASVDSCENSVLEIIAF 360
    |||
    301 aakegkieftrhllqrefsglsHSRKFTWECYGPVRSIYDLASVDSCENSVLEIIAF 360
Db
OY 361 HCKSPHRRHNVLEPLNLKLOAKMDLLIPKFLNLCNLIVMFIPTAVAVHOPPLKKQAA 420
    |||
    361 hckspHRRHNVLEPLNLKLOAKMDLLIPKFLNLCNLIVMFIPTAVAVHOPPLKKQAA 420
Db
OY 361 hckspHRRHNVLEPLNLKLOAKMDLLIPKFLNLCNLIVMFIPTAVAVHOPPLKKQAA 420
    |||
    361 hckspHRRHNVLEPLNLKLOAKMDLLIPKFLNLCNLIVMFIPTAVAVHOPPLKKQAA 420
Db
OY 421 PHLKAEVNSMLTGHILLLGGIYLLVGOLWFWRHVRFTWISFIDSFEILFLFOALL 480
    |||
    421 phlkAEVNSMLTGHILLLGGIYLLVGOLWFWRHVRFTWISFIDSFEILFLFOALL 480
Db
OY 421 phlkAEVNSMLTGHILLLGGIYLLVGOLWFWRHVRFTWISFIDSFEILFLFOALL 480
    |||
    421 phlkAEVNSMLTGHILLLGGIYLLVGOLWFWRHVRFTWISFIDSFEILFLFOALL 480
Db
OY 481 TVVSQVLCFLAIEWYLPPLVLSALVGLMLLTYTRGFQHTGISVMIQKYLRLDLRFL 540
    |||
    481 tvvsqVLCFLAIEWYLPPLVLSALVGLMLLTYTRGFQHTGISVMIQKYLRLDLRFL 540
Db
OY 481 tvvsqVLCFLAIEWYLPPLVLSALVGLMLLTYTRGFQHTGISVMIQKYLRLDLRFL 540
    |||
    481 tvvsqVLCFLAIEWYLPPLVLSALVGLMLLTYTRGFQHTGISVMIQKYLRLDLRFL 540
Db
OY 541 IYLVFLGFAVALVLSQEAWRPEARTGPNATSVOPMEQDEGCAQYRGILLESLEL 600
    |||
    541 iylvflgfaValvlsQEAWRPEARTGPNATSVOPMEQDEGCAQYRGILLESLEL 600
Db
OY 541 iylvflgfaValvlsQEAWRPEARTGPNATSVOPMEQDEGCAQYRGILLESLEL 600
    |||
    541 iylvflgfaValvlsQEAWRPEARTGPNATSVOPMEQDEGCAQYRGILLESLEL 600
Db
OY 601 FKTTIMGELAFQEOHLFRGMVLLLLAVVLTLYTILLNMLIALMSETVNSVATDSMSIT 660
    |||
    601 fkttiMGELAFQEOHLFRGMVLLLLAVVLTLYTILLNMLIALMSETVNSVATDSMSIT 660
```


XX Human; vanilloid receptor homologue; VANILREP2; polymorphic variant;
 KM PVP-1; therapy: diagnosis; chronic pain; neuropathic; postoperative;
 KM rheumatoid arthritis; neuralgia; algesia; nerve injury; ischemia;
 KM neurodegeneration; stroke; incontinence; inflammatory disorder.
 OS Homo sapiens.
 XX MO937765-A1.
 XX PD 29-JUL-1999.
 XX PF 25-JAN-1999; 99WO-EP00420.
 XX PR 20-JAN-1999; 99GB-0001209.
 XX PR 27-JAN-1998; 98EP-0300549.
 XX PR 26-OCT-1998; 98GB-0023421.
 XX PA (SMIK) SMITHKLINE BEECHAM PLC.
 XX PI Davis JB, Duckworth DM, Hayes PD;
 XX DR WPI: 1999-479049/40.
 XX DR N-PSDB; AA207116.
 XX PT New human vanilloid receptor homologues (VANILREP2)
 XX PS Claim 4; Page 35-37; 47pp; English.
 XX CC The present sequence represents a human vanilloid receptor homologue
 CC VANILREP2 polymorphic variant PVP-1. VANILREP2 can be used to diagnose
 CC disease or susceptibility to disease related to expression or activity
 CC of VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
 CC including pain, (for example chronic, neuropathic, postoperative,
 CC rheumatoid arthritis), neuralgia, algesia, nerve injury, ischaemia,
 CC neurodegeneration, stroke, incontinence, and inflammatory disorders.
 XX SQ Sequence 763 AA:
 Query Match 99.6%; Score 3988.5; DB 20; Length 763;
 Best Local Similarity 99.9%; Pred. No. 0; Mismatches 0; Indels 1; Gaps 1;
 Matches 763; Conservative 0; Mismatches 0; Indels 1; Gaps 1;
 QY 1 MTPSSSPVRLLETLDDGDESEADRGKIDFGSGLPMEQFOGGRKFAPIRYNLNY 60
 DB 1 mtpssspvrlletlddgdegsaadrkldfgsglpmpesqfgedrfaqdirnlly 60
 QY 61 RKGTGASQDPKPRFDRDLFNAVSRGVPEDLAQLPEYLSKTSKYLTDSEYTBGSGTKCL 120
 DB 61 rkgtgasqdpkprfdrdlfnavsrgvpedlaglpeylsktskyltdseytbgstgkctl 120
 QY 121 MKAVALNKGAVACILPLQIDRDSGNPQLVNAOCTDYYGHSALHTAIEKRSLOCYK 180
 DB 121 mkaavlnkgavacilplqidrdsnpqlvnaqctdyyghsalhtatekrslocvk 180
 QY 181 LLVNGANVHARACGRFPOKGGTCFYEGELPLSLAACKQMDVSYLLENPHOPASLOA 240
 DB 181 llvnganvharaagrffqkggctfyegelpslsackkgdvsvyllenphopasloa 240
 QY 241 TDSQNTYVHALVMTSDNSAENIALVTSMTDGLQAGARLCPVOLEDIRNLQDLTPKL 300
 DB 241 tdsqntylvhalvmtsdnsaenialvtsmtdglqagarlcpvtqedirnlqdltpkl 300
 QY 301 AAKEKIEIFRIILQREFSGLSLRKFTKEMCGYPRVSLYDLASVDSCEENSVLEITAF 360
 DB 301 aakekietfrilqrefsglslrkftewcygprvsllydasvdsceensvleiaf 360
 QY 361 HCKSPHRRMNVLEPLNKLQAKMDLLPKFPLNFCNLIIYFIFAAVYHQPTLKKQA 420
 DB 361 hcksphrnmvleplnklqakmdllpkfplnfcnllyfifaaavyhqbptlkk-aa 419
 QY 421 PHLKAEGNSMLLTGHILLGLGTYLLVGQLMYFWRNHVETWISFTDSYFEILLFQALL 480

DB 420 phlkaevngsmlltghilllllgtyllvgqlmyfwrthfwisfidsyfeillfqaill 479
 QY 481 TVVSOVLCPLAIEWYLPILVSAIVGMNLKYTRGFQHTGISWICKVILRDLRFL 540
 DB 480 tvvsovlcplaiewylpilvsalvgmnlkytrgfhtgisywmlkvilrdlrfl 539
 QY 541 IYLVFLGFAVALVLSQEAAMPPEAPTGNATESVOPMGODEGNGAQVRCGLEASLEL 600
 DB 540 ylvflgfaavalvlsqeaamppeaptgnatesvqpmeggedngaqvrglleaslel 599
 QY 601 EKFTIGMGEIARQEOLEHFGAVLLLLAYVLLPYILLNMLIALMSEYVNSVATDSMSIW 660
 DB 600 ekftigmgeiafqeqlhfrgmwllllyaylllylllmlialmsetvnsvaldsmsiw 659
 QY 661 KIQKATSVLEMENGYWMCCKKORAGVMLVGTKPDGSPDERMCFREEVNMASWMDTPT 720
 DB 660 kiqukatsvlemenywmcckkqragvmltvgtkpdgspterwctfreevnmawswdtp 719
 QY 721 LCEDEPSGAGVPRTELENPVLASPPKEDGASEBNVYPVQLQSN 764
 DB 720 lcedpsgagvprtleenpvlasppkedegaseenypvqlqsn 763
 RESULT 7
 ID AAY84834
 AC AAY84834; standard; Protein; 764 AA.
 XX DT 08-AUG-2000 (first entry)
 XX DE Amino acid sequence of a vanilloid receptor-like (VR-L) protein.
 XX CC Cation channel protein; vanilloid receptor-like 1 protein; VR-L;
 KM noxious heat; pain; inflammation; tissue damage; nociception;
 KM gene therapy; sensory neuron; immune system; analgesic; immunomodulatory;
 KM neuromodulatory.
 OS Homo sapiens.
 PH Key Location/Qualifiers
 FT Misc-difference 149 /note= "Gly encoded by CAG"
 FT Region 162..193 /note= "ankyrin-like repeat"
 FT Misc-difference 200 /note= "Lys encoded by AAT"
 FT Region 208..240 /note= "ankyrin-like repeat"
 FT Region 293..323 /note= "ankyrin-like repeat"
 FT Domain 391..410 /note= "ankyrin-like repeat"
 FT Domain 438..453 /note= "transmembrane domain 1"
 FT Domain 468..489 /note= "transmembrane domain 2"
 FT Domain 501..527 /note= "transmembrane domain 3"
 FT Domain 535..554 /note= "transmembrane domain 4"
 FT Domain 560 /note= "transmembrane domain 5"
 FT Misc-difference 567 /note= "Thr encoded by GCT"
 FT Region 587..608 /note= "possible pore loop"
 FT Domain 619..645 /note= "transmembrane domain 6"
 FT Misc-difference 667 /note= "unspecified amino acid encoded by TMT"
 PN WO200022121-A2.

PD 20-APR-2000.
 XX 08-OCT-1999; 99WO-GB03348.
 XX 09-OCT-1998; 98GB-0022124.
 XX (UNLO) UNIV COLLEGE LONDON.
 XX Garcia R, Wood JN, England S;
 DR WPI: 2000-317978/27.
 DR N-PSDB: AAA14874.
 XX Novel non-selective cation channel protein and nucleotides useful as
 PT screening agents and in gene therapy of disorders associated with
 PT sensory neurons and leucocytes such as pain, autoimmune disorders and
 XX leukemia
 XX Claim 2; Fig 3A; 55pp: English.
 XX
 CC The present sequence represents a non-selective cation channel protein,
 CC designated vanilloid receptor-like 1 (VR-L). The protein is obtained
 CC from human T lymphocytes. The VR-L protein is activated by noxious heat,
 CC and is not capsaicin sensitive. VR-L is expressed in sensory neurons,
 CC and is likely to play a role in mediating the pain and inflammation
 CC accompanying tissue damage (nociception). The VR-L polynucleotide is
 CC useful for influencing the electrophysiological and/or pharmacological
 CC properties of a cell, and is also useful in the gene therapy treatment
 CC of disorders associated with sensory neurons and/or cells of the immune
 CC system and also for the preparation of a medicament for use in gene
 CC therapy. The VR-L polynucleotides and polypeptides are useful for
 CC identifying a substance with ion-channel modulating activity (such as
 CC analgesics), or compounds which affect nociception, immunomodulatory
 CC agents, neuromodulatory agents.
 XX
 SO Sequence 764 AA:

Query Match 98.4%; Score 3939; DB 21; Length 764;
 Best Local Similarity 98.0%; Pred. No. 0;
 Matches 749; Conservative 6; Mismatches 9; Indels 0; Gaps 0;

QY 1 MTSSSSVFPLETLDGGEDGSEADRGKLDGSGLPMSQFQGEDRKEAPQIRVNLNY 60
 DB 1 mtspsvfrleldggedgseadrgkldfgsglpmesqfgedrkfasqirvnlly 60
 QY 61 RKGGASQPDNRFRDRRFRMAVSRGVPEDEACIPEYLSKTSKILTOSEYEGSGTKCL 120
 DB 61 rkgtgaqpdpnrfrdrfrlmavsrgvpedlaigpeylsktskyltdeyegsgtkcl 120
 QY 121 MKAVLNKDGVNACILPLAQIDRDSGNPQPLVNAQCTDYYRGSHALHIAEKSLQCVK 180
 DB 121 mkavlnkdgvnactilplaqidrdsgnppqlvnaqctdyyrgshalhiaekslqcvk 180
 QY 181 LIVENGANVHARACGRFFQKQGTCTFFGELPLSLAACKOMDVSYLLENPHOPASLQA 240
 DB 181 livennganvharaagrffqkgqgtctffgelpslaaclkwdvsvyllenphopasla 240
 QY 241 TDSQGNVLAHALVWISONSANENIALVSMVGDILQAGARICPTVOLERTIRLOCTPLKL 300
 DB 241 tdsqgnvhlalvwmisnsanenalvsmvgdilqagartlcpvtqlertirldltpkl 300
 QY 301 AAKSGKIEIFRHILQREFSGLSHRKFTWECYGPVRVSLDYLDASVDSCEENSVLEITAF 360
 DB 301 aaksgkieifrhilqrefsglsshrktewecygpvrsvldyasvdsceensvleita 360
 QY 361 HCKSPHRRHMYVEPLNKLQAKWDLIPKFLNCLIMFTFTAVAYOPLTKKQAA 420
 DB 361 hcksphrhmyveplnklqakwdliphkflnclimftftavayopltkkqaa 420
 QY 421 PHLAAEAGNSMLTGHILILGIGIYLLVGOALFMRHRHVFIFWISYFEILFLFOLL 480
 DB 421 phlaeagnsmltghililgigiyllvgolmfrhrhvfifwisyfeilflfll 480

QY 481 TVVSQVLCEFLAIEWLPLLVSAVLGWLNLVYTRGFQHTGITYSMIOKVIILRDLLRFL 540
 DB 481 tvsvlclvlewpllvsvavgwlnlvtrgfhgtgitysmidkvilrdmrvflv 540
 QY 541 TVLVFEGFAVALVSLSGEAMREAPTPGNATESVQPMGEQDEGNGAQYRGILEASLEL 600
 DB 541 tylvfegfavalvslsgeamreaptpgnatesvqpmgeqdegngaqyrgileaslel 600
 QY 601 EFKRTGMEELAFOROLHRRGWLILLLAVYLLTYLLNLMLIALMSEFVNSVATDSWSIW 660
 DB 601 efrtgmeeleforolhrrgwlllllavylltyllnlmlialmsefvnsvatdswsiw 660
 QY 661 KLOKAISVLEMGNGYMWCKRKORAGVMLTVGTKPDGSPDERMCFRFEENNAWMEOTLPT 720
 DB 661 klkaiisvlemgngymwckrkoragvmltvgtkpdgspdermcfreennawmeotlpt 720
 QY 721 LCEDESGAGVPRTELENPVLASPPKEDGASBENTVPVQLQSN 764
 DB 721 lcedpsgagvprtleenpvlasppkedgaseenypvqllqsn 764

RESULT 8
 AA97364
 ID AA97364 standard; Protein: 630 AA.
 XX
 AC AA97364;
 XX
 DT 14-SEP-2000 (first entry)
 XX
 DE Human VR-2 (alternate form) protein.
 XX
 KW VR-2; human; vanilloid receptor; nociceptor; pain signalling;
 KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW chromosome 17p11-12; gene therapy.
 XX
 OS Homo sapiens.
 XX
 PN WO200029577-A1.
 XX
 PD 25-MAY-2000.
 XX
 PF 12-NOV-1999; 99WO-US26701.
 XX
 PR 13-NOV-1998; 98US-0108322.
 PR 28-DEC-1998; 98US-0114078.
 PR 26-FEB-1999; 99US-0258633.
 PR 19-OCT-1999; 99US-0421134.
 XX
 PA (MILL-) MILLENNIUM PHARM INC.
 XX
 PI Curtis RAJ;
 XX
 DR WPI: 2000-387790/33.
 DR N-PSDB: AAA30255.
 XX
 PT New capsaicin/vanilloid receptor polynucleotides and polypeptides, used
 PT to modulate pain signalling mechanisms
 XX
 PS Example 1; Fig 16; 183pp: English.
 XX
 CC The present sequence is the protein sequence for an alternate form of
 CC human capsaicin/vanilloid receptor VR-2, which is involved in pain
 CC signalling. The coding sequence was isolated by searching a heart
 CC cDNA library for genes encoding novel receptors of the
 CC capsaicin/vanilloid family, and has been shown to be located at
 CC chromosome 17p11-12. This region has been associated with myasthenia
 CC gravis, Smith-Magenis syndrome, COR5, Cone-rod dystrophy, Choroidal
 CC dystrophy, central areolar and retinal cone dystrophy, and it is possible
 CC that the protein may be used to treat or diagnose these disorders. In
 CC addition, the gene, protein and its antibodies can be used to diagnose
 CC and treat hyperalgesia, inflammation, infection, ischemia, joint pain,
 CC tooth pain, headaches, pain associated with surgery or neuropathic pain,

CC possibly via the use of gene therapy.
 XX
 SO Sequence 630 AA:

Query Match 81.4%; Score 3258; DB 21; Length 630;
 Best Local Similarity 82.5%; Pred. No. 2e-301;
 Matches 630; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

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QY 1 MNSPSSPVRLLETLIDGGEDSEADRGKIDPSSGLPMESSQPGGDRKFAPIRINLWY 60
DB 1 MNSPSSPVRLLETLIDGGEDSEADRGKIDPSSGLPMESSQPGGDRKFAPIRINLWY 60
QY 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 120
DB 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 120
QY 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 120
DB 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 120
QY 121 MKAVLNLKDVNACILPLQLIDRDSGNPOPLVNAQCTDDYYRGSHALHAIERKSLQCYK 180
DB 121 MKAVLNLKDVNACILPLQLIDRDSGNPOPLVNAQCTDDYYRGSHALHAIERKSLQCYK 180
QY 181 LIVENGANHARACGRFRFGKQCTCFYFGEPLPLSLACTKQMVVSYLLENPHQPSLQA 240
DB 181 LIVENGANHARACGRFRFGKQCTCFYFGEPLPLSLACTKQMVVSYLLENPHQPSLQA 240
QY 241 TDSQGTVLHALVMIWISDMSAENIALVTSWMDGLQAGARLCPTVOLEDIRNLQDLPLK 300
DB 241 TDSQGTVLHALVMIWISDMSAENIALVTSWMDGLQAGARLCPTVOLEDIRNLQDLPLK 300
QY 301 AAKGKIEIFRHLQREFSGLSLRSKRTFEMCYGPVRSVLYDLASVDSCEENSVEIIRAF 360
DB 301 AAKGKIEIFRHLQREFSGLSLRSKRTFEMCYGPVRSVLYDLASVDSCEENSVEIIRAF 360
QY 361 HKKSPRRHMYVLEPINKLQAKMDLIRKFLNFCNLIMYIFNVAVYHOPTLKKQAA 420
DB 361 HKKSPRRHMYVLEPINKLQAKMDLIRKFLNFCNLIMYIFNVAVYHOPTLKKQAA 420
QY 421 PHLKAEGVSMILTGHIILLLGIGYLLVGLQWYFMRHRYFIWISFDSYFEILFQALL 480
DB 421 PHLKAEGVSMILTGHIILLLGIGYLLVGLQWYFMRHRYFIWISFDSYFEILFQALL 480
QY 481 TVVSOVCLTALIEWYPLVLSALVGLMNLVYTRGFQHTGIYSVMIOKVIILDLIRPLL 540
DB 481 TVVSOVCLTALIEWYPLVLSALVGLMNLVYTRGFQHTGIYSVMIOKVIILDLIRPLL 540
QY 541 IYLVFLFGFAVALVSLSGEAMREAPRTGNATPESVQPMGQDEDEGAGYRGITLSELEI 600
DB 541 IYLVFLFGFAVALVSLSGEAMREAPRTGNATPESVQPMGQDEDEGAGYRGITLSELEI 600
QY 601 FKFTIGMGLAFQEOBLHFRGMVLLLLAVVLTLYILLNMLIALMSETVNSVATDSMSIW 660
DB 601 FKFTIGMGLAFQEOBLHFRGMVLLLLAVVLTLYILLNMLIALMSETVNSVATDSMSIW 660
QY 661 KIQAALSVLEMENGYWCKKQKQAGVMLVGTCKPDGSPPERKCFRVEEYVNMASWEDTLP 720
DB 661 KIQAALSVLEMENGYWCKKQKQAGVMLVGTCKPDGSPPERKCFRVEEYVNMASWEDTLP 720
QY 721 LCEDPGAGVPTLENVPLASPKEDGASBENYVPVOLLQSN 764
DB 721 LCEDPGAGVPTLENVPLASPKEDGASBENYVPVOLLQSN 764
QY 587 Icedpsgagvprtlempvlasppkedgaseenyvpyqlqsn 630
DB 587 Icedpsgagvprtlempvlasppkedgaseenyvpyqlqsn 630

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KW capsaicin receptor; VR1; rat; vanilloid; analgesic; pain;
KM inflammation; therapy; diagnosis.
XX Rattus rattus.
XX W09937675-A1.
XX 29-JUL-1999.
XX 22-JAN-1999; 99WO-US01418.
XX 22-JAN-1998; 98US-0072151.
XX (REGC ) UNIV CALIFORNIA.
PI Brake AJ, Caterina M, Julius DJ;
DR WPI; 1999-469113/39.
DR N-PSDB; AAX87478.
PT New isolated capsaicin receptor polypeptide and related nucleic acid
PT - useful for detecting vanilloid compounds, identifying modulators,
PS and in diagnosis or treatment of e.g. pain and inflammation
PS Claim 4: Page 81-83; 120pp; English.
XX The present sequence represents rat vanilloid receptor-related
XX polypeptide 1 (VRP-1 or VR2), as deduced from a cDNA clone (see
XX AAX87478) isolated from a rat brain cDNA library. VRP-1 is an
XX example of a capsaicin receptor-related polypeptide of the
XX invention. It is not activated by capsaicin or heat, but may
XX interact with the novel capsaicin receptor VR1 (see AAY06555). It
XX shows 49% identity with rat VR1. The invention provides vanilloid
XX receptor polypeptides and polynucleotides, including capsaicin
XX receptor-related polypeptides and polynucleotides, as well as
XX expression vectors, host cells and transgenic animals. It also
XX provides a method of using such receptors to identify vanilloid
XX compounds in natural products or to screen candidate compounds that
XX modulate capsaicin receptor function for use as analgesics (vanilloid
XX analogues, therapeutic antibodies, antisense oligonucleotides,
XX capsaicin receptor-encoding polynucleotides for gene therapy),
XX flavour-enhancing agents, etc. Capsaicin receptor-related
XX polypeptides and specific antibodies can also be used for the
XX diagnosis and treatment of human disease and pain.
XX
XX Sequence 761 AA:

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Query Match 76.2%; Score 3051.5; DB 20; Length 761;
 Best Local Similarity 77.7%; Pred. No. 1.3e-281;
 Matches 598; Conservative 62; Mismatches 93; Indels 17; Gaps 7;

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QY 1 MNSPSSPVRLLETLIDGGEDSEADRGKIDPSSGLPMESSQPGGDRKFAPIRINLWY 60
DB 1 MNSPSSPVRLLETLIDGGEDSEADRGKIDPSSGLPMESSQPGGDRKFAPIRINLWY 60
QY 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 115
DB 61 RKGTGASQDPNFRDRILFNAAVSRCVPEDLAGLPEYLSKTSKYLTDSEYESTGKTCL 115
QY 116 GRTCLMAVNLKDVNACILPLQLIDRDSGNPOPLVNAQCTDDYYRGSHALHAIERKSL 175
DB 116 GRTCLMAVNLKDVNACILPLQLIDRDSGNPOPLVNAQCTDDYYRGSHALHAIERKSL 175
QY 176 LQCVKILVNGANVHARACGRFRFGKQCTCFYFGEPLPLSLACTKQMVVSYLLENPHQP 235
DB 176 LQCVKILVNGANVHARACGRFRFGKQCTCFYFGEPLPLSLACTKQMVVSYLLENPHQP 235
QY 236 ASLOATDSQGNVTLHALVMIWISDMSAENIALVTSWMDGLQAGARLCPTVOLEDIRNLQDL 295
DB 236 ASLOATDSQGNVTLHALVMIWISDMSAENIALVTSWMDGLQAGARLCPTVOLEDIRNLQDL 295
QY 296 TPLKLAKEGKIEIFRHLQREFSG-LSHLRSKRTFEMCYGPVRSVLYDLASVDSCEENS 354
DB 296 TPLKLAKEGKIEIFRHLQREFSG-LSHLRSKRTFEMCYGPVRSVLYDLASVDSCEENS 354

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|||||
Db 297 tpllaaegkietlfrhlqreifsgpyprlsrktewcygvrvslydlsavdsekns 356
355 LEIAFHCKSPHRRHVMVLEPLNKLQAKMDLIPKFFLNLCNLIYMFIFTAAVHOPT 414
357 leiafncspnrrnmvyleplnkllqekwdrlvsrffnfacylymfiftvayhqs 416
Qy 415 LKQAPHLKAEVGNLSMLTGHILLGGIYLLVGOQMYEMRRHVFMTWISFIDSEILF 474
Db 417 lqgpaipskcatfgesmllyghlllllggylllgqlywfwrrllflwistmdayfelf 476
Qy 475 LFOALLTVVSGVLCFLAEWLPPLVLSALVGMNLVYTGFOHTGTSYMIQKVLIRD 534
Db 477 llqelllvlsqvlrfmetewyplllvlslygwlnlllytrgfhgtgysymqkvlird 536
Qy 535 LLRFLIYLVLPFGFAVALVSLSOEAMRPEAPTPNATESQPEGEDENGAOYRGIL 594
Db 537 llrllylvlylflgfavalyslstearspkapednastvteqplvgqee--papyrsl 594
Qy 595 EASLELFRFTIGMGLAFQEOHFRGWLILLAYVLLTYLLNMLTALMSETVNSVAT 654
Db 595 daslelfrftigmgelaafgeqlrfryvlllllayvlltylllnmltalmssetvnhad 654
Qy 655 DSNSTIKLQKRAISYLEMENGWMC-RKQKAGVMLTVGTRKDGSPDERKCRVEEVMAS 713
Db 655 nswsiwklqkalsvleemengwmcrrkkhregrlkvgtrgdgtpderwcfiveevmaa 714
Qy 714 WEORLPTLCEPSGAGVPRTELENPVLASPKEDGASEEYVVOLOS 763
Db 715 weklptlpsedpsgpltnknpt----skpgksaseedhlpdyqgs 760

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RESULT 10
AAW9790
ID AAW9790 standard; Protein: 761 AA.
XX
XX AAW9790;
XX
XX 16-JUN-1999 (first entry)
XX
DE Rat VRRP-1 (VR2) capsaicin receptor.
XX
XX VRL; capsaicin receptor; VR2; VRRP-1; analgesic; diagnosis;
XX human disease; painful syndrome.
XX
XX Rattus rattus.
XX
XX W09909140-A1.
XX
XX 25-FEB-1999.
XX
XX 20-AUG-1998; 98WC-US17466.
XX
XX 22-JAN-1998; 98US-0072151.
XX 20-AUG-1997; 97US-0915461.
XX
XX (REGC ) UNIV CALIFORNIA.
XX
XX PI Brake A, Caterina M, Julius DJ;
XX
XX WPI; 1999-181023/15.
XX
XX N-PSDB; AAX19730.
XX
XX New capsaicin receptor polypeptide - useful for screening or
XX characterizing capsaicin receptor-binding compounds
XX
XX Claim 4; Page 78-79; 99pp; English.
XX
XX The present sequence is an isolated capsaicin receptor polypeptide
XX (1). Capsaicin polypeptides are useful for identifying binding compounds
XX which affect cellular responses. Preferably this is for identifying a
XX compound that binds (1) and affects a cellular response associated with
XX capsaicin biological activity (e.g. intracellular calcium flux). The

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CC polypeptides and host cells are useful for detecting a vanilloid
CC compound (an essential structural component of capsaicin) from natural
CC products by detecting an alteration of intracellular response associated
CC with capsaicin receptor activity, preferably an alteration of
CC intracellular calcium levels, and are useful for screening for compounds
CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
CC are useful for diagnosis and treatment of human diseases and painful
CC syndromes. The transgenic mammals can be used to screen for capsaicin
CC receptor antagonists and agonists. Prior art methods for screening or
CC characterizing new capsaicin receptor-binding compounds relied on assays
CC using sensory neurons in culture or in intact animals. The new
CC polypeptides provide a more sensitive screen.
XX
XX Sequence 761 AA;

```

```

Query Match 76.2%; Score 3051.5; DB 20; Length 761;
Best Local Similarity 77.7%; Pred. No. 1.3e-281;
Matches 598; Conservative 62; Mismatches 93; Indels 17; Gaps 7;

```

```

Qy 1 MTSFSSPVFRLETLDDGQEDSGEADRGKLDGSLPPMESQFQGEDRKFPQIRVNLNY 60
Db 1 mtsasspafrietsdgedgeaevnkkyge----ppmespfqrednspqkvnlnf 56
Qy 61 ----RKGTGA-SQDPNRFDRLEFNASRGVPBDLAGLPEYLSKTSKYLTQSEYTGST 115
Db 57 lkrpklmtsapsgqepdrfdtrllfsvrsrgypeelcgllleylrwnakylldsaytegst 116
Qy 116 GKTCIMKAVNLKQGVNACILPLQIDRDSGNRPPLVNAOCTDQYVGHSLHAIRKRS 175
Db 117 gktcimkavnldqgvnacdmpllqldkdsnpkplvnaqctdefyghsalhalekrs 176
Qy 176 LQCVKLIVENGANVHARAGRFQKGGCTCFEGELPLSLACTKQMDVSYLLENHOP 235
Db 177 lqcvklivengadvhiraagrfqkbgctcyfelpslactkqgdvvylllenhqp 236
Qy 236 ASLQATDSQGNTVLHALVMSDNSAENIALVTSWYDGLLAGARLCPVTOLEDIRNLDL 295
Db 237 asleatdsqgnvtvhalvmsadnsensalvthmydglqmgarlcptvqleesnhqgl 296
Qy 296 TPLLAKEGKEIEFRHILQREFSG-LSHLSRKTQEMCYGVRRSLVDLASVDSCEENSV 354
Db 297 tpllaakegkietlfrhlqreifsgpyprlsrktewcygvrvslydlsavdsekns 356
355 LEIAFHCKSPHRRHVMVLEPLNKLQAKMDLIPKFFLNLCNLIYMFIFTAAVHOPT 414
357 leiafncspnrrnmvyleplnkllqekwdrlvsrffnfacylymfiftvayhqs 416
Qy 415 LKQAPHLKAEVGNLSMLTGHILLGGIYLLVGOQMYEMRRHVFMTWISFIDSEILF 474
Db 417 lqgpaipskcatfgesmllyghlllllggylllgqlywfwrrllflwistmdayfelf 476
Qy 475 LFOALLTVVSGVLCFLAEWLPPLVLSALVGMNLVYTGFOHTGTSYMIQKVLIRD 534
Db 477 llqelllvlsqvlrfmetewyplllvlslygwlnlllytrgfhgtgysymqkvlird 536
Qy 535 LLRFLIYLVLPFGFAVALVSLSOEAMRPEAPTPNATESQPEGEDENGAOYRGIL 594
Db 537 llrllylvlylflgfavalyslstearspkapednastvteqplvgqee--papyrsl 594
Qy 595 EASLELFRFTIGMGLAFQEOHFRGWLILLAYVLLTYLLNMLTALMSETVNSVAT 654
Db 595 daslelfrftigmgelaafgeqlrfryvlllllayvlltylllnmltalmssetvnhad 654
Qy 655 DSNSTIKLQKRAISYLEMENGWMC-RKQKAGVMLTVGTRKDGSPDERKCRVEEVMAS 713
Db 655 nswsiwklqkalsvleemengwmcrrkkhregrlkvgtrgdgtpderwcfiveevmaa 714
Qy 714 WEORLPTLCEPSGAGVPRTELENPVLASPKEDGASEEYVVOLOS 763
Db 715 weklptlpsedpsgpltnknpt----skpgksaseedhlpdyqgs 760

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RESULT 11
AAV06560
ID AAY06560 standard; Protein: 727 AA.
XX AC AAY06560;
XX
XX 08-OCT-1999 (first entry)
XX DT
XX DE Human vanilloid receptor-related polypeptide 1 (VRRP-1).
XX
XX Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;
XX capsaicin receptor; VR1; human; vanilloid; analgesic; pain;
XX inflammation; therapy; diagnosis.
XX
OS Homo sapiens.
XX
XX Key Location/Qualifiers
XX FT Misc-difference 194..208
XX FT /note= "unidentified residues"
XX FT Misc-difference 308
XX FT /note= "unidentified residue"
XX FT Misc-difference 311
XX FT /note= "unidentified residue"
XX FT Misc-difference 343..368
XX FT /note= "unidentified residues"
XX FT Misc-difference 404
XX FT /note= "unidentified residue"
XX FT Misc-difference 460..474
XX FT /note= "unidentified residues"
XX FT Misc-difference 558
XX FT /note= "unidentified residue"
XX FT Misc-difference 608
XX FT /note= "unidentified residue"
XX
XX MO9937675-A1.
XX
XX 29-JUL-1999.
XX
XX 22-JAN-1999; 99WO-US01418.
XX
XX 22-JAN-1998; 98US-0072151.
XX
XX (REGC) UNIV CALIFORNIA.
XX
XX Brake AJ, Caterina M, Julius DJ;
XX
XX WPI: 1999-469113/39.
XX
XX New isolated capsaicin receptor polypeptide and related nucleic acid
XX - useful for detecting vanilloid compounds, identifying modulators,
XX and in diagnosis or treatment of e.g. pain and inflammation
XX
XX Claim 4; Page 91-93; 120pp; English.
XX
XX The present, claimed sequence represents a human vanilloid receptor-
XX related polypeptide 1 (VRRP-1 or VR2) sequence predicted from
XX available EST sequences (see AAX97499-501). VRRP-1 (see also AAY06559)
XX is an example of a capsaicin receptor-related polypeptide of the
XX invention. It is not activated by capsaicin or heat, but may
XX interact with the novel capsaicin receptor VR1 (see AAY06558). The
XX invention provides capsaicin receptor and capsaicin receptor-
XX related polypeptides and polynucleotides, as well as expression
XX vectors, host cells and transgenic animals. It also provides a
XX method of using such receptors to identify vanilloid compounds in
XX natural products or to screen candidate compounds that modulate
XX capsaicin receptor function for use as analgesics (vanilloid
XX analogues, therapeutic antibodies, antisense oligonucleotides,
XX capsaicin receptor-encoding polynucleotides for gene therapy),
XX flavour-enhancing agents, etc. Capsaicin receptor-related
XX polypeptides and specific antibodies can also be used for the
XX diagnosis and treatment of human disease and pain.
XX
XX Sequence 727 AA:
SQ

Query Match 75.8%; Score 3036.5; DB: 20; Length 727;
Best Local Similarity 79.1%; Pred. No. 3.1e-280;
Matches 620; Conservative 5; Mismatches 82; Indels 77; Gaps 10;
QY 1 MTPSSSPVFRLETLDDGGDEGSEADRGKLDGSGCLPMEGQFOGDERRFAPQIRVNLNY 60
DB 1 mtpssspvfrletlddggedseadrykldfsgslpmpesqfgedrfrapqirvnlny 60
QY 61 RKGTGASQDPNRPDRDLFNNAVSRGVPEDLAGLPBYLSKTSKYLTDSYTGSGTKTCL 120
DB 61 rkgtgasqdpnrpdrdlfnnavsrvgpedlaglpeylsktakyldseytgsgtkctcl 120
QY 121 MKAVNLKDGVCNACTLPLQLIDRSGNPQLVYNAQCTDDYRGHSAHLAIKRSIQCVK 180
DB 121 mkavnlkdgvnactlplqlidrsqnpqlynaqctddyrgshalhaiakrsiqcvk 180
QY 181 LIVENGANVHARACGRFEGKGGTCEYFEGELPLSLAACKQMDVVSYLENPHQASLQA 240
DB 181 livenganvharacgrfegkgggtceyfelplslaaackqmdvvsyllenphqaslaqa 240
QY 241 TDSQGNFVLHALVMSIDNSAENIALVTSWYDGLDAGARLCPTVQLEDIRNLODLTPKL 300
DB 241 tdsqgnfvlhalvmsidsnaenialvtsywdglagarlcpvtqledirnlodltpkl 300
QY 301 AAKEGKIEIF-RHIL-QREFSGLS-HLSRKFTPE-WCYGVRVSLVDLASVDSCEENSVLE 356
DB 301 aakegkixlfrhllasgkifsglkpfrfkfcmwlmgprvrvxxxxxxx 360
QY 357 IIAFHCKSPRRHMYLEPLNKLQAKMDLIPKPEPLNLCMLIYWFIFTAVAVHYOPTLK 416
DB 361 xxxxxxxxprdhmrvleplnklqakwlllpkfflnlcnlxymfiftavaaybqplk 420
QY 417 KOAAPHLKAENVGNSMLTGHILLIGGITYLVGQLYTFERR-----HVF 460
DB 421 kgaaphlkaevgnsmlltghillllygqkwkfwxxxxxxx 478
QY 461 IMISFIDSYFEILFLFQALLTVVSGVLCFLATLEMYLPLVLSALVLGMLNLVYTRGFQHT 520
DB 479 -----tyvpapacvca---gaglaepalllytwl-----pahrlh 509
QY 521 GIYSVMIOKVLRLDLLRFLLIYLVFLGFAVALVLSIQEAMRPEAPTGPNATESVQPMEG 580
DB 510 qchd-----pealvsisqd-wrpeaptgnatesvqpmeg 543
QY 581 QDEDENGAQRIGLLEASLELFKFTTGMGBLAFQEOIHRFGMVLILLAVLTITILLNM 640
DB 544 qedegngaqrygrllxaslelflftlmgelaifeglhfrgmvlilllavillyllnm 603
QY 641 LIALMSETVNSVATDSMSIWKLOKATSVLEMENGYMWCRRKORAGVMLTVGTRPDGSPDE 700
DB 604 lialsetvnsvatdswsiwklqkatsvlemengymwcrrkkrqagvmltvgtlkrpdspe 663
QY 701 RMCFRVEEYVNMASWEQTLPTLCEDPGAGVPTLENPVLASPPKEDDGASBENYVPVL 760
DB 664 rmcfrveevnmasweqtlptlcedpsgagvptlenpvlasppkededgaseenyvvpvl 723
QY 761 LOSN 764
DB 724 lqsn 727
RESULT 12
AAV99798
ID AAV99798 standard; Protein: 727 AA.
XX AC AAV99798;
XX
XX 16-JUN-1999 (first entry)
XX DT
XX DE Human VRRP-1 (VR2) capsaicin receptor.
XX

KM VR1: capsaicin receptor; VR2: VRP-1; analgesic; diagnosis;
KM human disease; painful syndrome.
XX Homo sapiens.
XX OS
XX PN W0909140-A1.
XX PD 25-FEB-1999.
XX PF 20-AUG-1998; 98WO-US17466.
XX PR 22-JAN-1998; 98US-0072151.
XX PR 20-AUG-1997; 97US-0915461.
XX PA (REGC) UNIV CALIFORNIA.
XX PI Brake A, Caterina M, Julius DJ;
XX DR WPI: 1999-181023/15.
XX PT New capsaicin receptor polypeptide - useful for screening or
XX characterising capsaicin receptor-binding compounds
XX PS
XX Claim 4; Page 86-88; 99pp; English.
CC The present sequence is an isolated capsaicin receptor polypeptide
CC (1). Capsaicin polypeptides are useful for identifying binding compounds
CC which affect cellular responses. Preferably this is for identifying a
CC compound that binds (1) and affects a cellular response associated with
CC capsaicin biological activity (e.g. intracellular calcium flux). The
CC polypeptides and host cells are useful for detecting a vanilloid
CC compound (an essential structural component of capsaicin) from natural
CC products by detecting an alteration of intracellular response associated
CC with capsaicin receptor activity, preferably an alteration of
CC intracellular calcium levels, and are useful for screening for compounds
CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
CC are useful for diagnosis and treatment of human diseases and painful
CC syndromes. The transgenic mammals can be used to screen for capsaicin
CC receptor antagonists and agonists. Prior art methods for screening or
CC characterising new capsaicin receptor-binding compounds relied on assays
CC using sensory neurons in culture or in intact animals. The new
CC polypeptides provide a more sensitive screen.
XX
XX Sequence 727 AA:
SQ
Query Match 75.8%; Score 3036.5; DB 20; Length 727;
Best Local Similarity 79.1%; Pred. No. 3.1e-280;
Matches 620; Conservative 5; Mismatches 82; Indels 77; Gaps 10;
QY 1 MTPSSSPVFLFETLDGQGDGSEADRGKLDGSGLPMESSQFQGEDRRFAPQIRVNINLY 60
Db 1 mtpssspvflfletldgqgdgseadrgkldfsgslpmesfsgedtkfapqirvni 60
QY 61 RKGTSASQPPDKRFRDRFLNNAVSRGVPEDLAGLPEYLSKTSKYLTDESEYEGSGTKTCL 120
Db 61 rkgtsasqppdkrfrdrflnnavsrvgpedlaglpeylsktskyltdeseyegstgkcl 120
QY 121 MKAVNLADGVNACTLPLLOIDROSGNOPPLVNAQCTDYVYRGSHALHATEKRLQCYK 180
Db 121 mkavnladgvnactlplloidrosgnopplvnaqctdyvyrghshalekrlsqcyk 180
QY 181 LLVENGANVHARACGRPFQKGGCTCFYFGLPLSLAACKTQWQDVVSYLLENPHOPASIOA 240
Db 181 llvengannvharcgrpfqkggctcfyfglplslaaactkqwdvvsyllenphopasioa 240
QY 241 TDSQNTVYLHALWMSDMSAENIALVTMYDGLQAGARLCTVOLEDIRNLQDITPLKL 300
Db 241 tdsqntvylhalwmsdmsaenialvtmydglqagarlctvqledirnlqditplkl 300
QY 301 AAKKEKIEIF-RHIL-QREFSGLS-HLSRKFTF-WCYGPVRVSLVDLASVDSCEANSVLE 356
Db 301 aakegkief-rhil-qrefsgls-hlsrkfte-wcygpvrsvlvdlasvdsceansvle 360

QY 357 IIAFHCKSPHRRRMVYLEPLNKLQAKWDLIPKFEFLNCLNLYMFTTAVAYHQPTLK 416
Db 361 xxxxxxxxprdrhmvyleplnklqakwdllpkfflnclnlymfittavayhqptlk 420
QY 417 KOAAHKLKAEVGNMILTGHIILLAGIYLYLGOLMYFRR- 476
Db 421 kgaaphlkaevgnsmlltghlililgyllylgolkmyfrr- 478
QY 461 WISFIDSYFELLPLFQALLFVWSQVLCFLAEWLLPLVLSALVGLMNLVYTRGFQHT 520
Db 479 -----rvpapaevca---gaglaeepallvtw1-----pahrl 509
QY 521 GIYSWICKVILRDLRFLLIYVLFGRFVALVSLSQEAMPPEAPPTGNATESYQPMG 580
Db 510 gchd-----pealvsisd-wrpeaptpgnatesyqpmg 543
QY 581 QDEBNGAOYRGILASLEFRTTGKFLAFOEOLHFRGWLILLAYVLLTYILLNM 640
Db 544 gedegnagayrglilxaslelftligmgelaftgeqihfrgmvlillayvillylllm 603
QY 641 LIALSEFVNSVATDSMSIWKLOKAI SVLEMENGYWMCRRKORAGVMLTVGKPPGSPDE 700
Db 604 lialsetvnsvaldswsiwklokaivlemengywccrkqragvmltvgtkppgspde 663
QY 701 RMCFRVEEVNMAWBDOTLPTLCEDEPSGAGVPRTLBNPLASPPKDEDEGASEENVVPO 760
Db 664 rmcfrveevnmaswbdotlptlcedepsgagvprtlbnplaspkdedegaseenvvpql 723
QY 761 LQSN 764
Db 724 lqsn 727
RESULT 13
AAV97359
ID AAV97359 standard; Protein: 436 AA.
XX
AC AAV97359;
XX
DT 05-SEP-2000 (first entry)
XX
DE Human VR-2 (alternate form) partial protein.
XX
KW VR-2; human; vanilloid receptor; nociceptor; pain signalling;
KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
KM chromosome 17p11-12, gene therapy.
XX
OS Homo sapiens.
XX
PN W0200029577-A1.
XX PD 25-MAY-2000.
XX PF 12-NOV-1999; 99WO-US26701.
XX PR 13-NOV-1998; 98US-0108322.
XX PR 28-DEC-1998; 98US-0114078.
XX PR 26-FEB-1999; 99US-0258633.
XX PR 19-OCT-1999; 99US-0421134.
XX PA (MILL-) MILLENNIUM PHARM INC.
XX
PI Curtis RAJ;
XX
DR WPI: 2000-387790/33.
DR N-PSDB: AAV97359.
XX
PT New capsaicin/vanilloid receptor polynucleotides and polypeptides, used
PT to modulate pain signalling mechanisms
XX
PS Claim 11; Fig 3; 183pp; English.
XX

CC The present sequence is the partial sequence for an alternate form of
 CC human capsaicin/vanilloid receptor VR-2, which is involved in pain
 CC signalling. The coding sequence was isolated by searching a heart
 CC cDNA library for genes encoding novel receptors of the
 CC capsaicin/vanilloid family, and has been shown to be located at
 CC chromosome 17p11-12. This region has been associated with myasthenia
 CC gravis, Smith-Magenis syndrome, CORD5, Cone-rod dystrophy, choroidal
 CC dystrophy, central areolar and retinal cone dystrophy, and it is possible
 CC that the protein may be used to treat or diagnose these disorders. In
 CC addition, the gene, protein and its antibodies can be used to diagnose
 CC and treat hyperalgesia, inflammation, infection, ischaemia, joint pain,
 CC tooth pain, headaches, pain associated with surgery or neuropathic pain,
 CC possibly via the use of gene therapy.

CC
 XX
 SQ Sequence 436 AA;

Query Match 55.98; Score 2240; DB 21; Length 436;
 Best Local Similarity 76.5%; Pred. No. 1.1e-204;
 Matches 436; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

QY 195 GREFGKGGCFEYGEPLSLACTKQMDVSYLLENPHOPASLOATDSOGNTVLAHLM 254
 DB 1 griffqyqgctfrygelplslactkqwdvsvyllenphpaslqatdsqgnvhalvm 60
 QY 255 ISDNSAENIALVSMYDGLQAGARLCPVQLDIRMLQDLTPKLAKGKIEIFRHIL 314
 DB 61 lsdnsaenialvsmysydgllqagarlcpvtqledinrlqdltpklakgkiefhhl 120
 QY 315 QREFSGLSHRSKFTFEMCYPRVSVSLYDLASVSCENSVLEIIRPKSPHRRMYLE 374
 DB 121 qrefsglshsrkftfemcyprvsvslydlasvscensvlelirfcksphrmyvle 180
 QY 375 PLKKLLQAKMDLLIPKELFNLITFMFIETFAVAYHOPILKROAPHLKAEGNSMLTF 434
 DB 181 plkllqakmdllipkelfnlltymfietfayhqpilkrkaephlaegynsmllt 240
 QY 435 GHILLGLGILYLVGOLWYFRRHVFITWISFIDSYEILFLFOALLTVVSQVLCFLAIEW 494
 DB 241 ghlllgilgilylvgolwfyrrhvfwtwifsidyefilflfqaalltvvsqvlclaiew 300
 QY 495 YLPLVASIVLGMNLILYTRGFOHNGIVSMLOKYLRLRLFLILYLVLFGLFANALV 554
 DB 301 ylplvasivlgmnlilytrgfhngivsmlokvrlrlrlflilylvlfglfanalv 335
 QY 555 SLSEQAMRPAPTPGNATESVQPMEOGEDNGAQQYRGILAELELFTKMGELAFOE 614
 DB 336 ----- 335
 QY 615 QLHFRGNVLLLLLAAYLLTYILLNMLIALMSETVSVATDSMSIMKLOKAISVLEMENG 674
 DB 336 -----kaivsl'emeng 346
 QY 675 YMMCKRKQKRGVNLITGTRKDSPPDERMCRPREVENNANASMEOTLPTICEPSSAGVPRTL 734
 DB 347 ymmckrkqrgvnlitgtrkdsppdermcrpreveennanasmootlpticepsagvprtl 406
 QY 735 ENPVLASPKEDGASEENYVPOLLQSN 764
 DB 407 enpvlaspkedgaseenyvpoqlqsn 436

RESULT 14
 AA97360
 ID AA97360 standard; protein; 554 AA.

XX
 AC AA97360;
 XX
 DT 05-SEP-2000 (first entry)
 XX
 DE Rat partial VR-2 protein.
 XX
 KW VR-2; rat; vanilloid receptor; nociceptor; pain signalling;

KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW gene therapy.

XX
 OS Rattus sp.

PN W0200029577-A1.

PD 25-MAY-2000.

PF 12-NOV-1999; 99MO-US26701.

PR 13-NOV-1998; 98US-0108322.

PR 28-DEC-1998; 98US-0114078.

PR 26-FEB-1999; 99US-0258633.

PR 19-OCT-1999; 99US-0421134.

XX
 PA (MILL-) MILLENNIUM PHARM INC.

XX
 PI Curtis RAJ;

DR MPI: 2000-387790/33.

XX
 PT N-PSDB; AAA30256.

XX
 PS New capsaicin/vanilloid receptor polynucleotides and polypeptides, used
 to modulate pain signalling mechanisms

XX
 Claim 11; Fig 4; 183pp; English.

CC The present sequence is the protein sequence for the rat
 CC capsaicin/vanilloid receptor VR-2, which is involved in pain signalling.
 CC The coding sequence was isolated by searching a dorsal root ganglion
 CC library for genes encoding novel receptors of the capsaicin/vanilloid
 CC family. The human version of this gene is found at chromosome 17p11-12, a
 CC region which has been associated with myasthenia gravis, Smith-Magenis
 CC syndrome, CORD5, Cone-rod dystrophy, choroidal dystrophy, central areolar
 CC and retinal cone dystrophy, and it is possible that the human protein may
 CC be used to treat or diagnose these disorders. In addition, the human
 CC gene, protein and its antibodies can be used to diagnose and treat
 CC hyperalgesia, inflammation, infection, ischaemia, joint pain, tooth pain,
 CC headaches, pain associated with surgery or neuropathic pain, possibly via
 CC the use of gene therapy.

XX
 SQ Sequence 554 AA;

Query Match 55.7%; Score 2230; DB 21; Length 554;
 Best Local Similarity 79.0%; Pred. No. 1.4e-203;
 Matches 437; Conservative 42; Mismatches 66; Indels 8; Gaps 4;

QY 213 LSLAACKQMDVSVSYLLENPHOPASLOATDSOGNTVLAHLMISDNSAENIALVTSMDG 272
 DB 7 lslaackqmdvsvtyllenphpaslcatdsjgnvhalvmadsnspensalvlmnydg 66
 QY 273 LLOAGARLCPVQLEDIRMLQDLTPKLAKGKIEIFRHILQRESG-LSHSKRTFEM 331
 DB 67 llqmagarlcpvtqlelirfcksphrmyvlepkllqakmdllipkelfnlltymfietfayhqpilkrkaephlaegynsmllt 126
 QY 332 CYGPRVSVSLYDLASVSCENSVLEIIRPKSPHRRMYLEPKLQAKMDLLIPK 391
 DB 127 cygprvsvslydlasvscensvlelirfcksphrmyvlepkllqakmdllipkelfnlltymfietfayhqpilkrkaephlaegynsmllt 186
 QY 392 FLNLFNLITFMFIETFAVAYHOPILKROAPHLKAEGNSMLTGHILLGLGILYLVGOL 451
 DB 187 flnfyltymfietfayhqpilkrkaephlaegynsmlltghillglgilylvgol 246
 QY 452 WYFRRHVFITWISFIDSYEILFLFOALLTVVSQVLCFLAIEWYLPVLVSAVLGMLNL 511
 DB 247 wyfrrhvfwtwifsidyefilflfqaalltvvsqvlrmetewyplvlvslvlgmnl 306
 QY 512 YTRGFOHNGIVSMLOKYLRLRLFLILYLVLFGLFANALVLSQAMRPAPTPGNA 571
 DB 307 ytrgfhngivsmlokvrlrlrlflilylvlfglfanalvlsrearspkapednms 366
